



## TEST REPORT

**Report No.:** E9466.01-501-47

**Rendered to:**

VEKA INC.  
Fombell, Pennsylvania

**PRODUCT TYPE:** PVC Casement Window  
**SERIES/MODEL:** CA55WW

**SPECIFICATION(S):** AAMA/WDMA/CSA 101/I.S.2/A440-11, *NAFS 2011 - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

AAMA/WDMA/CSA 101/I.S.2/A440-08, *NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

Title	Summary of Results
AAMA/WDMA/CSA 101/I.S.2/A440-08 and -11	Class LC-PG50 914 x 1829 (36 x 72) - C
Design Pressure	$\pm 2400$ Pa ( $\pm 50.13$ psf)
Air Infiltration	0.2L/s/m <sup>2</sup> (0.03 cfm/ft <sup>2</sup> )
Water Penetration Resistance Test Pressure	360 Pa (7.52 psf)

**Test Completion Date:** 07/10/15

Reference must be made to Report No. E9466.01-501-47, dated 07/20/15 for complete test specimen description and detailed test results.



**1.0 Report Issued To:** Veka Inc.  
100 Veka Drive  
Fombell, Pennsylvania 16123-0250

**2.0 Test Laboratory:** Architectural Testing, Inc., a subsidiary of Intertek (Intertek-ATI)  
1140 Lincoln Avenue  
Springdale, Pennsylvania 15144  
724-275-7100

**3.0 Project Summary:**

**3.1 Product Type:** PVC Casement Window

**3.2 Series/Model:** CA55WW

**3.3 Compliance Statement:** Results obtained are tested values and were secured by using the designated test method(s). The specimen tested successfully met the performance requirements for a **Class LC-PG50 914 x 1829 (36 x 72) - C** rating.

**3.4 Test Dates:** 07/09/15 - 07/10/15

**3.5 Test Record Retention End Date:** All test records for this report will be retained until July 10, 2019.

**3.6 Test Location:** Veka Inc. test facility in Fombell, Pennsylvania. Calibration of test equipment was performed by Intertek-ATI in accordance with AAMA 205-01 "In-Plant Testing Guidelines for Manufacturers and Independent Laboratories".

**3.7 Test Specimen Source:** The test specimen was provided by the client. Representative samples of the test specimen(s) will be retained by Intertek-ATI for a minimum of four years from the test completion date.

**3.8 Drawing Reference:** The test specimen drawings have been reviewed by Intertek-ATI and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Intertek-ATI per the drawings located in Appendix C. Any deviations are documented herein or on the drawings.

**3.9 List of Official Observers:**

<u>Name</u>	<u>Company</u>
Doug Merry	Veka Inc.
Cornell Charles	Veka Inc.
Joseph Allison	Intertek-ATI

#### 4.0 Test Specification(s):

AAMA/WDMA/CSA 101/I.S.2/A440-11, *NAFS 2011 - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

AAMA/WDMA/CSA 101/I.S.2/A440-08, *NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

#### 5.0 Test Specimen Description:

##### 5.1 Product Sizes:

Overall Area: 1.7 m <sup>2</sup> (18.0 ft <sup>2</sup> )	Width		Height	
	millimeters	inches	millimeters	inches
Overall size	914	36	1829	72
Vent size	864	34	1778	70

##### 5.2 Frame Construction:

Frame Member	Material	Description
Head, sill, jambs	PVC	Extruded

	Joinery Type	Detail
All corners	Mitered	Thermally welded

##### 5.3 Vent Construction:

Vent Member	Material	Description
All rails and stiles	PVC	Extruded

	Joinery Type	Detail
All corners	Mitered	Thermally welded

##### 5.4 Weatherstripping:

Description	Quantity	Location
0.300" diameter hollow vinyl bulb with kerf mount base	1 Row	Perimeter of vent, perimeter of frame

## 5.0 Test Specimen Description: (Continued)

**5.5 Glazing:** *No conclusions of any kind regarding the adequacy or inadequacy of the glass in any glazed test specimen(s) can be made.*

Glass Type	Spacer Type	Interior Lite	Exterior Lite	Glazing Method
1" IG	Rectangular-shaped steel, single sealed	1/8" annealed	1/8" annealed	The glass was set from the interior against a double sided adhesive tape and secured with rigid vinyl glazing beads.

Location	Quantity	Daylight Opening		Glass Bite
		millimeters	inches	
Vent	1	756 x 1670	29-3/4 x 65-3/4	1/2"

**5.6 Drainage:** No drainage was utilized.

### 5.7 Hardware:

Description	Quantity	Location
Metal multi-point lock system	1	Lock side jamb
Molded plastic tie bar guides	8	Lock side jamb, above and below each lock point
Metal keeper	4	Lock stile at 3", 25", 45-1/2" and 65-1/2" up from the bottom, each fastened to the stile with two #8 x 3/4" flat head screws.
Metal snubber	3 Sets	Hinge stile/jamb, located 1/4 points and at midspan
Steel single arm concealed hinge	2	Head / top rail, and sill / bottom rail
Dual arm rotary operator	1	Sill

### 5.8 Reinforcement:

Drawing Number	Location	Material
RF SH37 AOM	All stiles and rails	Extruded aluminum

## 6.0 Installation:

The specimen was installed into a Spruce-Pine-Fir wood buck. The rough opening allowed for a 1/8" shim space. The nail fin perimeter of the window was sealed with silicone sealant.

Location	Anchor Description	Anchor Location
Integral nail fin perimeter	#8 x 1" truss head screw	Nominally spaced at 9" on center, beginning at each corner.
Lock side jamb	#8 x 3" flat head screws	One at each tie bar guide (4)

**7.0 Test Results:** The temperature during testing was 21°C (70°F). The results are tabulated as follows:

**Test Specimen #1:**

Title of Test	Results	Allowed	Note
<b>Operating Force,</b> per ASTM E 2068	Initiate motion: 22 N (5 lbf) Maintain motion: 22 N (5 lbf) Locks: 44 N (10 lbf)	Report Only  30 N (7 lbf) max.  100 N (22.5 lbf) max.	
<b>Air Leakage,</b> Infiltration per ASTM E 283 at 75 Pa (1.57 psf)	0.2 L/s/m <sup>2</sup> (0.03 cfm/ft <sup>2</sup> )	1.5 L/s/m <sup>2</sup> (0.3 cfm/ft <sup>2</sup> ) max.	1
<b>Water Penetration,</b> per ASTM E 547	N/A Pass	N/A No leakage	3 2
<b>Uniform Load Deflection,</b> per ASTM E 330	N/A	N/A	3
<b>Uniform Load Structural,</b> per ASTM E 330	N/A	N/A	3
<b>Forced Entry Resistance,</b> per ASTM F 588, Type: B - Grade: 10	Pass	No entry	
<b>Thermoplastic Corner Weld</b>	Pass	Meets as stated	
Title of Test	Results	Allowed	Note
<b>Sash Vertical Deflection</b> 200 N (45 lbf)	3.5 mm (0.14")	17.3 mm (0.68") max.	
<b>Distributed Load</b> 300 Pa (6.27 psf)	Pass	No damage	
<b>Optional Performance</b>			
<b>Water Penetration,</b> per ASTM E 547 at 360 Pa (7.52 psf)	Pass	No leakage	2
<b>Uniform Load Deflection,</b> per ASTM E 330 taken at the top rail +2400 Pa (+50.13 psf) -2400 Pa (-50.13 psf)	1.8 mm (0.07") 8.0 mm (0.32")	Report Only	4, 5, 6
<b>Uniform Load Structural,</b> per ASTM E 330 taken at the top rail +3600 Pa (+75.19 psf) -3600 Pa (-75.19 psf)	0.3 mm (0.01") 0.8 mm (0.03")	3.6 mm (0.14") max. 3.6 mm (0.14") max.	5, 6

## 7.0 Test Results: (Continued)

*Note 1: The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440 for air leakage resistance.*

*Note 2: Without insect screen.*

*Note 3: The client opted to start at a pressure higher than the minimum required. Test results are reported under Optional Performance.*

*Note 4: The deflections reported are not limited by AAMA/WDMA/CSA 101/I.S.2/A440 for this product designation. The deflection data is recorded in this report for special code compliance and information only.*

*Note 5: Loads were held for 10 seconds.*

*Note 6: Tape and film were used to seal against air leakage during structural testing. In our opinion, the tape and film did not influence the results of the test.*



Intertek-ATI will service this report for the entire test record retention period. Test records such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained by Intertek-ATI for the entire test record retention period.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen(s) tested. This report may not be reproduced, except in full, without the written approval of Intertek-ATI.

For INTERTEK-ATI.

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Joseph E. Allison  
Senior Technician

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Lynn George  
Director – Regional Operation

JEA:sld

Attachments (pages): This report is complete only when all attachments listed are included.

Appendix-A: Alteration Addendum (1)

Appendix-B: Location of Air Seal (1)

Appendix- C: Drawing(s) (1) Complete drawings packet on file with Intertek-ATI.





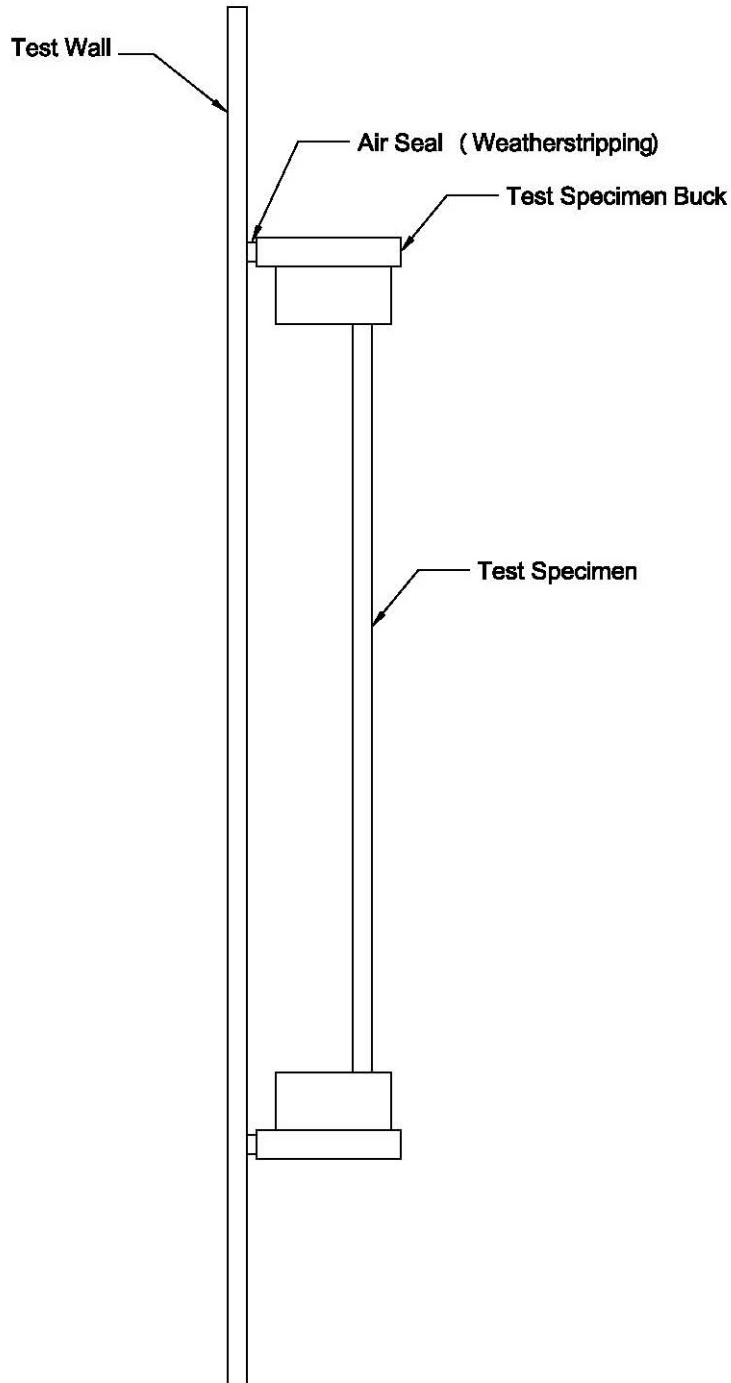
## **Appendix A**

### **Alteration Addendum**

***Note:*** *No alterations were required.*

## Appendix B

**Location of Air Seal:** The air seal between the test specimen and the test wall is detailed below. The seal is made of foam weatherstripping and is attached to the edge of the test specimen buck. The test specimen buck is placed against the test wall and clamped in place, compressing the weatherstripping and creating a seal.

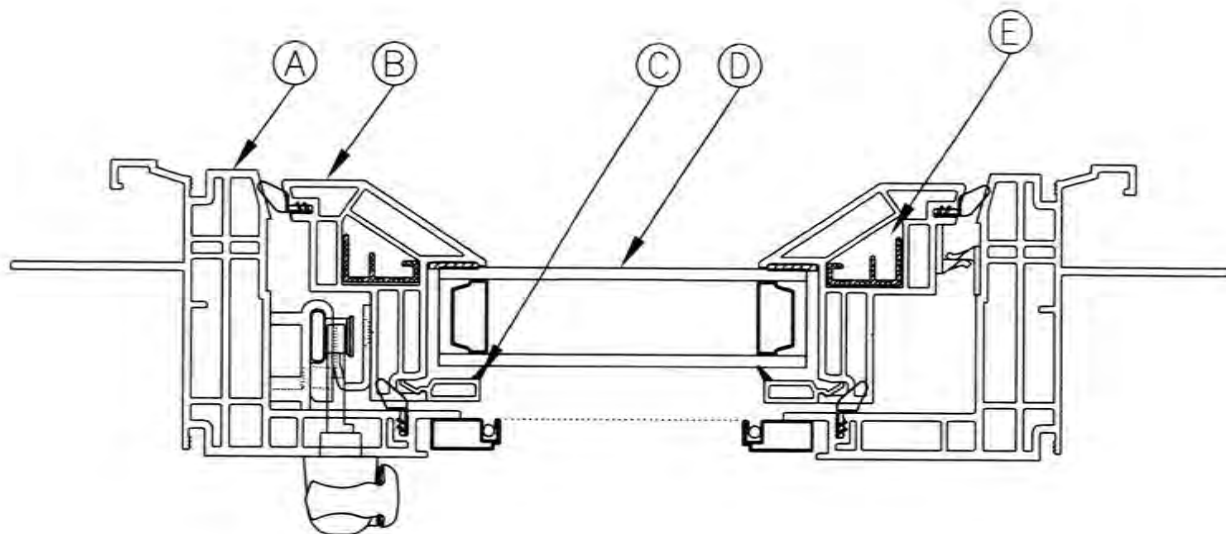
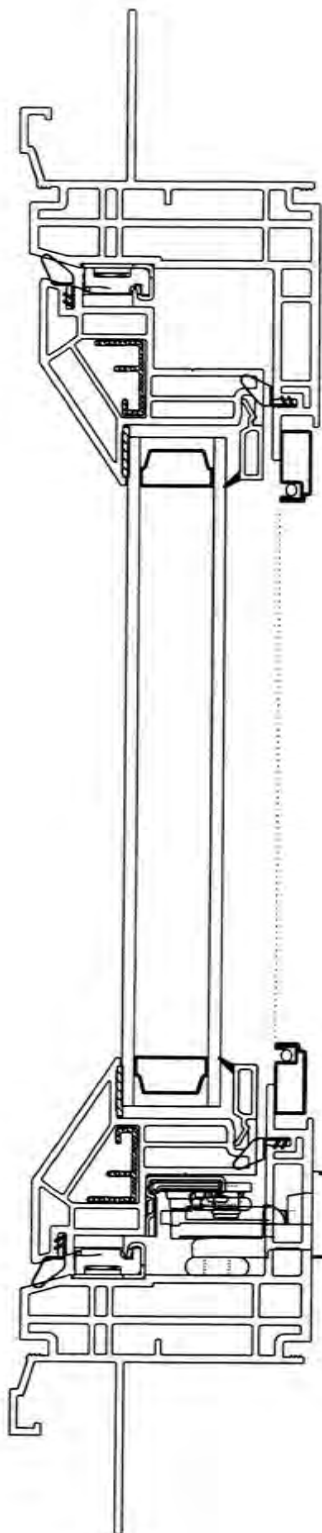




## **Appendix C**

### **Drawing(s)**

***Note:*** Complete drawings packet on file with Intertek-ATI.



- (A) CA5501 COMMON FRAME
- (B) PC02 COMMON SASH
- (C) BV44 GLAZING BEAD
- (D) 1" I.G.
- (E) RF SH37 AOM SASH REINFORCEMENT



Architectural Testing

Test sample complies with these details.  
Deviations are noted.

Report# E9466

Date 7/14/15

Tech [Signature]

A	XXXX	XXX	XXX	XX/XX/XX
REV	ECN.	CHANGE	BY	DATE

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VEKA INC.  
100 VEKA DRIVE  
FOMBELL, PA 16123

DESCRIPTION: 55 SERIES CASEMENT ASSEMBLY  
FULLY WELDED

C-SIZE

BY

BJF

DATE

07/14/15

SCALE

FULL

DWG #

CA55WW 1IN  
WITH RFSH37